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Programme element II.d (iii)

Matters left pending and other issues arising from the programme elements of the Intergovernmental Panel on Forests process

Issues that need further clarification: forest conservation and protected areas

Report of the Secretary-General

Summary

Forests cover slightly more than a quarter and other wooded lands about 8 per cent of the total area of the earth's land surface. In many parts of the world, they constitute the biologically most diverse terrestrial ecosystems. Social, economic, ecological, cultural and spiritual values of forests have long been recognized by human society. However, the continuing alarming rates of deforestation, forest degradation, fragmentation and forest decline in recent decades are forcing the international community and civil society to review the current state and strategies for forest conservation, and to develop new approaches to protect a range of forest values.

Long-term protection of representative and unique types of forests is recognized as an integral part of sustainable forest management. All eight regional processes on the formulation of criteria and indicators of sustainable forest management, involving more than 100 countries, include the establishment of protected forest areas as one of the basic criteria. A network of protected forest areas of representative and unique forest types also serves as a critical baseline to assess the impact of human interventions in other similar forest types.

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Accordingly, a systematic monitoring of the state of protected forest areas is essential to assess the ecological implications of forestry practices and human interventions.

An ecosystem approach towards sustainable forest management includes protected forest areas as an integral component. This perspective considers wilderness areas, production forests, communities, watershed functions etc. in the overall planning and management framework.

Over the past century, the creation of protected areas has emerged as a widely accepted approach for forest conservation. About 8 per cent of the world's forests are currently contained within protected areas. That average figure reflects considerable variation between different regions and nations and between different forest types and ecosystems. Generally speaking, however, the current extent and types of protected areas, particularly in densely populated regions, are deemed insufficient to achieve sustainable forest management due to both internal and external factors.

The involvement of local people as stakeholders represents a major step towards the creation of partnership arrangements with local communities and indigenous people in the establishment and management of protected forest areas. There is often a convergence of interest between indigenous people and local communities and the management of protected forest areas. Mechanisms need to be developed to identify such convergence, and to review and apply the valuable experience gained from a number of countries.

The present report makes a number of preliminary proposals for action which the Forum may wish to consider, concerning the conservation of all types of forests within the revision/development of national forest programmes and policies; appropriate strategies, including legislation, to define and achieve forest conservation goals; adequate resources to effectively develop and implement forest conservation legislation, policies and strategies; collaborative forest management mechanisms that provide for local communities to share in the benefits from forests conservation initiatives; establishing new protected areas in priority areas; linking *in situ* and *ex situ* conservation measures and efforts; innovative mechanisms for financing forest conservation initiatives; and ecological corridors of regional and/or global significance.

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I. Mandate and scope

A. Mandate

1. Programme element II.d (iii) was defined at the first session of the Intergovernmental Forum on Forests (IFF) as follows:

> "*Consider other issues arising from the programme elements of the Intergovernmental Panel on Forests (IPF) process needing further clarification ... inter alia ...* forest conservation, including conservation in protected areas" (see E/CN.17/IFF/1997/4, para. 7, category II (d)).

Work under this programme element is guided by the outcome of the second session of IFF, and will be the subject of substantive discussion at the third session.

B. Scope

2. A protected area may be defined as an area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural values, and managed through legal or other effective means.

3. Protected forest areas are special land areas that include representative and unique types of forests, managed for conservation purposes. Many also include cultural components and support appropriate sustainable uses. Their effective management strategy includes specific measures aimed to achieve stated objectives, i.e., maintain ecological processes, protect unique genotypes etc.

4. Protected forest areas, of appropriate size, conserve viable ecosystems to enable the study of ecological processes and the flow of ecosystems services, including maintaining water and air quality, the availability of soil nutrients and the role of such areas as carbon sinks. They provide economic benefits and contribute to spiritual, mental and physical well-being. Protected forest areas also help fulfil our ethical responsibility to respect nature and are a legacy to future generations.

5. Protected forest areas will need to be selected and managed primarily for their biological diversity and ecosystem values, while also contributing, where possible, to the livelihoods of the communities dependent upon them.

6. The draft conclusions and recommendations of the initiative of the Government of Australia, undertaken in support of the IFF programme of work, entitled: "International forest conservation: protected areas and beyond", have been taken into consideration in the preparation of the present report. It is also noted that the Governments of Brazil and the United States of America are co-sponsoring an international expert meeting on protected forest areas at San Juan, Puerto Rico, from 15 to 19 March 1999. The results of that expert meeting were not available at the time of writing the present report.

7. The present report, which has been prepared by the IFF secretariat, is based on inputs received from the United Nations Environment Programme (UNEP) in collaboration with member organizations of the informal, high-level Inter-Agency Task Force on Forests.

II. Introduction

A. Background

8. The fact that nearly every country has established protected areas is evidence of the commitment of Governments to ensuring that the current generation passes on to future generations a part of the biosphere at least as diverse and productive as the one it inherited. That commitment has been further strengthened by similar actions taken by many actors of civil society. Recently, the World Bank has become engaged very proactively in the creation and management of protected forest areas.

9. There is considerable diversity in the state of forests worldwide. While extensive tracts of pristine forest with sparse or no population are found in the Americas, the Congo basin and parts of South-East Asia, forests are in semi-natural to highly fragmented and degraded states in many other parts of the world. That diversity in the state of forests and forest types, particularly in highly populated countries with low forest cover, poses special challenges and requires innovative approaches towards the establishment and management of protected forest areas. In both developing and developed forest-rich countries, conflicts arise between industry and proponents to protect sizeable tracts of commercially valuable forests. On the other hand, in developing countries with scarce forests and increasing population, the decision makers face difficult choices between protection and meeting short-term subsistence needs of people living in and around ever-shrinking forests.

10. The conservation and protection of representative and unique forest types, both in natural and semi-natural conditions, as well as under a range of other conditions, are widely recognized as an integral part of sustainable forest

management. However, there are a number of significant deficiencies within existing protected forest areas. Shortcomings include a lack of comprehensiveness and representativeness; inadequacy in both the number of total protected forest areas and the extent of each protected forest area; a lack of connectivity/continuity among protected forest areas; and the inadequate management of many protected forest areas.

11. On the other hand, it is important to note that within the conceptual framework for forest conservation, not all action is or needs to be connected with legally established protected forest areas. Generally speaking, national forest laws and legislation related to wildlife, such as hunting and fishing licences, may have a larger overall positive impact on habitat and species conservation than formally established protected areas. In a number of countries, private protected areas and a culture of wildlife management among hunters and sports fishermen provide important contributions to habitat conservation and the application of informal codes of conduct related to wildlife protection.

12. Internationally, despite the numerous initiatives taken at the national, regional and international levels in support of forest conservation and protected forest areas, there is a need for many additional areas in many countries and forest types. In many parts of the world, even the existing protected forest areas are under increasing threat from the ever-increasing demand for land and for other resources (e.g., minerals, oil) to meet basic human needs, especially in poorer countries. Pollution, climate change and excessive tourism further add to the pressures associated with human activities. Too often, protected areas lack political support and their management is poorly funded.

B. General overview of the conclusions and proposals for action of the Intergovernmental Panel on Forests

13. In its final report (E/CN.17/1997/12), IPF highlighted forest conservation in several programme elements, and, *inter alia*:

(a) Encouraged countries to develop, implement, monitor and evaluate national forest programmes, taking into consideration ecosystem approaches that integrate the conservation of biological diversity;

(b) Invited countries and relevant international organizations, especially the Conference of Parties to the Convention on Biological Diversity, to collaborate with indigenous people and forest-dependent people who possess traditional forest-related knowledge to promote an internationally acceptable understanding of traditional forest-related knowledge, and to identify, respect, preserve and maintain traditional forest-related knowledge, including innovations and practices that are relevant for the conservation of forests, biological diversity and the sustainable use of forest biological resources;

(c) Noted that protected areas need to be established and supported, where appropriate, in fragile and endangered ecosystems affected by drought and desertification, as part of *in situ* conservation strategies;

(d) Urged countries to establish protected areas to safeguard forest and related ecosystems, their water supplies, and historical and traditional uses in appropriate localities in areas affected by drought, particularly in arid, semi-arid and dry sub-humid regions;

(e) Urged countries with low forest cover to establish or expand networks of protected areas, buffer zones and ecological corridors, where possible, in order to conserve biological diversity, particularly in unique types of forests, working in close liaison with the parties to the Convention on Biological Diversity and other relevant international environmental agreements.

III. Major issues

A. Ecological approach to protected forest areas

14. Existing protected forest areas have a number of shortcomings that require attention. They often lack comprehensiveness and representativeness, and do not provide an unbiased and complete coverage of a range of representative forest ecosystems and thus of biological diversity, principally because relatively few were established with this aspect as the primary goal. Some protected areas have been chosen for their outstanding natural beauty, or because they protect rare species or wilderness areas. Many, perhaps the majority, appear to have been chosen because at the time of their establishment, the land was of little value for alternative uses or human habitation. As a result, a considerable proportion of the biological diversity most in need of protection has not been protected; existing data on the world's protected areas suggests that evergreen sclerophyllous, temperate and boreal forests are generally poorly represented.

15. Criteria for an overall assessment of existing protected forest areas include:

(a) *Adequacy*. The adequacy of protected areas involves consideration of the size of the individual protected area, as well as the total number of protected areas. Generally speaking, protected areas should be sufficiently large and contiguous, with spatial configurations that maximize the area to perimeter ratio,[1] and where possible with connectivity to other protected areas. Many protected forest areas are of inadequate size or with inappropriate configuration or location to provide long-term protection to the forest values, particularly biological diversity, that they are intended to conserve. The total number and size of protected areas is still considered to be insufficient to protect some of the world's ecologically most valuable forest areas;

(b) *Connectivity*. Competing uses are generally not permitted in protected forest areas. However, they do not function in isolation from other components of the surrounding landscape, the impacts of other land uses or their underlying forces. The managers of protected areas are usually not empowered to influence the broader contexts of the surrounding landscape in terms of land use and economic and social pressures. Protected areas cannot function as "islands" disconnected from the use and human activities in their surrounding landscape; those established and managed without consideration of the surrounding landscape are unlikely to be effective in sustaining the objectives of their establishment;

(c) *Effectiveness*. There are many protected areas which are legally established but not functioning in practice. The reasons for this lack of effective function are many and varied; common themes include unsupportive policy and institutional framework, a lack of political and community commitment to protection, the alienation of communities from their traditional lands, and lack of capacity associated with the provision of insufficient resources for effective management.

16. It is generally recognized that existing protected forest areas are important, that they do protect many forest values, and that their establishment and management represent considerable effort and achievement. However, their deficiencies, such as small size and location as "islands" surrounded by incompatible land uses, often make them unable to adequately conserve biological diversity and protect other ecological values, as planned. With increasing population, conversion of forest land to other (sometimes less valuable or unsustainable) uses, anticipated climate change and other pressures associated directly or indirectly with human activities, a new approach is needed to ensure that both forests and protected forest areas can play their role in contributing to human well-being and the sustainability of the planet's life-support systems.

17. An ecosystems approach is key to the sustainability of forest conservation, including protected forest areas. While acknowledging the need for a workable description and further elaboration of the ecosystem approach, the Conference of Parties to the Convention on Biological Diversity, in its programme of work for terrestrial biological diversity, including forest biological diversity, recognized the importance of this approach, and recommended that IPF consider, *inter alia*:

(a) Strategies for sustainable forest management that are based on an ecosystem approach, which will integrate conservation measures (e.g., protected areas) and the sustainable use of biological diversity;

(b) The assessment of ecological landscape models, the integration of protected areas in the ecosystems approach to sustainable forest management, and the representativeness and adequacy of protected areas networks.

18. The Conference of Parties called on parties to:

(a) Develop guidelines for the selection, establishment and management of protected areas or areas where special measures need to be taken to conserve biological diversity;

(b) Establish a system of protected areas or areas where special measures need to be taken to conserve biological diversity;

(c) Regulate or manage biological resources important for the conservation of biological diversity, whether within or outside protected areas, with a view to ensuring their conservation and sustainable use;

(d) Promote environmentally sound and sustainable development in areas adjacent to protected areas with a view to furthering protection of these areas.

19. There are many other parts of the Convention which are relevant to protected areas (e.g., *ex situ* conservation, training, research, education), although in some cases the distinctive role which such areas can play in each of these has yet to be identified.

20. In its decisions, the Conference of Parties to the Convention has also emphasized the importance of protected areas in contributing to the conservation *in situ* of forest biological diversity, and has called for the compilation and dissemination of information on protected areas.

21. The conservation of forest biological diversity is an integral component of sustainable forest management. The contributions of protected forest areas towards the implementation of the Convention as well as sustainable forest management is widely recognized, and new initiatives

in this connection need to be launched to make the implementation of the Convention and of sustainable forest management more effective and results oriented.

B. Valuing the benefits of protected forest areas

22. The short-term and long-term benefits from a network of protected forest areas may not be fully realized due to various factors, such as macroeconomic policies, rural poverty, land tenure issues, habitat fragmentation and climate change, as well as inadequate funding, inadequate management capacity and lack of political commitment.

23. Protected forest areas, therefore, need to be placed in their broader context in order to contribute to local economies and human well-being as integral components of a productive and secure environment.

24. A wide range of benefits flow from forest conservation and are derived from protected forest areas, some of which involve the direct use of resources in protected forest areas, and can be valued in various ways, including through market prices. Most benefits from the protected forest areas, however, are difficult to value in monetary terms. These are usually referred to as social benefits, as illustrated by the following grouping of benefits:

Biological diversity
- Gene resources
- Species protection
- Ecosystem diversity
- Evolutionary processes

Ecological processes
- Fixing and cycling of nutrients
- Soil formation and conservation
- Circulation and cleansing of air
- Conservation and regulation of water flow
- Global life support

Watershed protection
- Erosion control
- Flood reduction
- Regulation of streamflows

Education and research
- Knowledge base

Economic benefits
- Recreation/tourism
- Herbs
- Medicines
- Food etc.

Non-consumptive benefits
- Aesthetic
- Spiritual
- Cultural/historical
- Existence value

Future values
- Ethical

25. Many protected forest areas provide substantial economic benefits to the region in which they are located. For example, a study conducted recently shows that the 8,700-hectare Sawara Mangrove Forest Reserve in Malaysia supports marine fisheries worth more than US$ 21 million every year, up to 3,000 jobs, timber products worth about US$ 23,000 per year and a tourist industry worth more than US$ 3.5 million. If the mangrove forests were to be damaged, these economic benefits would largely be lost, while expensive civil engineering works would be required to prevent coastal erosion, flooding and other damages.

26. Protected forest areas are crucial for conserving biological diversity, which itself has immense value for human well-being and potential economic development. A recent study identified about 3,000 plants that are active against cancers, 70 per cent of which are from the rainforest and can only be preserved in protected areas. The world market for prescriptions containing active ingredients from plants is estimated to be worth more than US$ 50 billion annually. Tropical rainforests host many species on which this trade depends, including some which have yet to be identified.

C. Managing protected forest areas in a changing society

27. Protected forest areas, like other types of protected areas, are traditionally established and managed as "islands". With the increase in population and other types of pressures on protected forest areas, their survival may be questionable unless new and innovative approaches are applied. Protected forest areas should not be managed in isolation from surrounding patterns of land use. The "ecosystem approach" holds the potential of making forest conservation more effective by including consideration of the establishment of "environmentally sound" land-use practices surrounding or integrated with protected forest areas. The establishment of buffer zones is also an effective means for the participation of indigenous people and local communities, including women, in the management of protected forest areas. In many developing countries, these zones need to supply

fuelwood and other products previously obtained — legally or otherwise — within the protected forest areas. The Biosphere Reserves established under the United Nations Educational, Scientific and Cultural Organization (UNESCO) Man and the Biosphere Programme has advocated the use of buffer zones since its initiation in 1970.

28. Community-based forest protection approaches can work if communities are involved in decisions from the start and Governments play a proactive role in ensuring community engagement (policy statements in favour of participation are not enough: it requires a commitment of personnel and funds by the Government to actually get communities involved).

29. Indeed, many local people in developing countries are afraid of the establishment of protected areas and resist them, viewing them as one more mechanism for the State and other "outsiders" to deprive them of their access to the resources that they need for their livelihood and subsistence. In such circumstances, decentralization of authority and shared responsibility for forest conservation and management is a potential solution.

30. Traditional knowledge of the utilization and management of forest resources, which is receiving inadequate attention by mainstream forest policy makers and the scientific community, may also play its role and demonstrate its value.

31. The world's remaining natural forests are increasingly fragmented, and most protected areas are too small to maintain genetically viable populations of many threatened species. One potential strategic intervention to halt these trends, advocated by some, includes the establishment of "biological corridors".

32. Consideration is needed of a multidimensional land management system, incorporating significant protected areas, ecosystems and habitats at the national and regional levels into a globally significant biological corridor network. The consolidation of a network of protected areas, buffer zones and land corridors is perceived as having a greater conservation value than the existing isolated and fragmented set of protected areas alone. New protected areas need to be identified/established so as to enhance the critical linkages of the biological corridor as additional benefits.

33. With the establishment of buffer zones and corridors, the role of forests outside protected areas in forest conservation will also be enhanced. Forests outside protected areas but as part of a network can contribute to the maintenance of continuous protected areas and transform protected areas from isolated islands to ecologically functional networks. Using forests outside protected areas to buffer them from human pressures, both economic and environmental, would reduce the vulnerability of protected areas and contribute to their sustainability.

34. In general, the vital role of protected forest areas in fostering ecological sustainability calls for further studies and dissemination of information, particularly to society at large. Furthermore, possible adverse effects of airborne pollutants and climate change on protected forest areas pose new and increasing challenges.

IV. Preliminary conclusions and proposals for action

Conclusions

35. An ecosystem approach towards sustainable forest management includes protected forest areas as an integral component. This perspective considers wilderness areas, production forests, communities, watershed functions etc. in the overall planning and management framework.

36. The fragmentation of forest land may be a constraint to the effective protection of forest areas in a number of countries. Existing convergent interests between local communities and objectives and mechanisms for the management of protected forests need to be further explored and identified to allow the effective participation of all stakeholders.

37. Most countries have adopted policies and strategies towards landscape and biological diversity conservation and introduced appropriate legislation. However, implementation and enforcement of these policies and laws in many countries are inadequate. Failure in the implementation of policies for forest conservation and protected areas, because of inadequate coordination or existence of conflicting polices and practices, inappropriate implementation strategies or a lack of institutional financial and human resources, is widely acknowledged as a major reason for the failure to achieve forest conservation goals in some countries.

38. Existing definitions of "protected forest areas" need to be expanded and made more flexible if they are to encompass the wide range of protection regimes existing in various countries. There is a need to develop a conceptual framework which accommodates protected forest areas, established to achieve a range of objectives and degrees of protection. These include national parks, provincial or state parks, municipal parks, ecological reserves, arboreta,

biosphere reserves, heritage forests and sacred forests. The selection and management of additional protected forest areas should be based on their value as representative or unique forest types; their potential to generate information on ecological processes; the conservation of biological diversity and ecosystem services; and due consideration to the livelihoods of the communities depending on them. The participation of local communities and society at large is essential for the success of the establishment and management of protected forest areas.

39. Protected forest areas need to be established and managed in their broader context so as to demonstrate that they contribute to local economies and human well-being. Carefully managed ecotourism is potentially an important source of revenue in protected areas; current data, however, suggest that the vast majority of ecotourism to protected forest areas takes place only in a few developed and a few developing countries.

40. For a variety of reasons, the establishment of protected forest areas without adequate legal protection and a site-specific management strategy does not necessarily result in achievement of forest conservation objectives. The effectiveness of protected areas can be assessed in terms of the following four critical considerations:

(a) *Protection of ecological diversity:* the degree to which the design and management of the protected area meets goals for the conservation of genetic diversity and for ecological, species, population and genetic as well as ecosystem processes;

(b) *Institutional capacity:* the ability of the managing agency to effectively manage the area, including degree of control, levels of skills and resource availability;

(c) *Positive social impacts:* the cultural and social appropriateness of protected area systems, how protected areas are integrated into the broader social fabric of the region, and the level of support from and involvement of local people;

(d) *Secure legal status:* the degree of protection afforded to protected areas under appropriate legislation, and the implementation of that legal status on the ground.

41. The forest sector is impacted upon by policies and activities of various other government sectors and commercial players. Many non-forest sector policies, such as those related to regional development, resettlement, trade, structural adjustment and agriculture, may have intended or unintended profound perverse impacts on forest conservation goals. The success of efforts to achieve forest conservation will be enhanced with effective cross-sectoral support and coordination. The linkages between conservation and development goals and policies which seek to achieve them are too strong and too complex for forest conservation to be able to succeed in isolation from other sectors of government, the economy and society.

42. Existing protected areas are important. They do protect a number of forest values, and represent considerable effort and achievement on the part of all concerned in their establishment and management. However, existing protected areas are not, in themselves, sufficient to achieve or sustain forest conservation objectives. The realities of the modern world mean that forest conservation cannot be based on a rigid demarcation between protected areas and all other forms of land use. Instead, protected areas should form part of a landscape or ecosystem-wide management approach, where the conservation of biological diversity and environmental services are accorded the highest priority, surrounded by areas where other activities take place, including, where feasible, sustainable commercial exploitation.

43. Understanding of the social, economic and ecological benefits of forest conservation and protected forest areas is limited, and the awareness of known benefits has not been disseminated to the public at large.

44. Many civil society actors have an interest in forest conservation; thus, many forms of partnership in support of forest conservation goals are possible and emerging. A variety of partnerships, operating at different geographic scales and with different objectives, will be necessary to address different challenges and take advantage of emerging opportunities. Developing partnerships for forest conservation to their full potential may require a willingness on the part of the Government to devolve authority to other actors willing to assume it, while retaining sufficient interest and influence to ensure that the public interest is respected and sufficient resources are provided to support traditional and/or devolved responsibilities.

Proposals for action

45. The Forum may wish to:

(a) Urge countries to commit themselves to the conservation of all types of forests, within the revision/development of national forest programmes and policies that recognize the linkage between forest conservation and sustainable development. This commitment may be achieved through a range of conservation mechanisms, reflecting varying national circumstances, applied in a network within and outside of protected forest areas;

(b) Urge countries, with support from international organizations, to develop and implement appropriate strategies, including legislation, to define and achieve forest conservation goals, including recognition of the multiple functions of all types of forests; community and other stakeholder participation; recognition and use of indigenous and local knowledge; integration of local community livelihood needs; planning on an ecosystem basis; and consideration of forests within and outside protected areas;

(c) Urge countries, with assistance from international organizations, to provide adequate resources to effectively develop and implement forest conservation legislation, policies and strategies, and to provide adequate staffing, funding and training to increase the financial and human resource capacity of forest and conservation agencies;

(d) Encourage countries, with support from international organizations, to develop and implement polices which adequately value non-market forest benefits in economic terms; recognize the real social and economic values of forest environmental services; recognize native forests as a capital resource and invest accordingly in preventing their depletion; seek to maintain overall biological diversity; and ensure that harvests do not exceed ecologically sustainable levels;

(e) Encourage countries to ensure that Governments at all levels introduce collaborative forest management mechanisms which provide for local communities to share in the benefits from forests conservation initiatives;

(f) Urge countries to develop mechanisms to engage all interested parties, in particular the private sector, in forest conservation, including financial support mechanisms for equitable sharing of benefits and costs;

(g) Request countries, with the support of international organizations, particularly UNEP and the World Conservation Union (IUCN), to make a comprehensive assessment of the current status of protected forest areas, including total number, extent of each area, objectives of establishment, effectiveness of management, IUCN system equivalent category, and basic biological and social information available;

(h) Urge countries to establish new protected areas in priority areas and international organizations, particularly UNEP, the Centre for International Forestry Research and IUCN, in close cooperation and consultation with governmental organizations, to establish criteria that identify and help select sites critical to the protection and maintenance of ecosystem services. Such sites should be connected to other sites by buffer zones, corridors, and nature-friendly land/water use;

(i) Urge countries to adopt public participation and stakeholder involvement in the planning and management of protected forest areas, recognize the rights of indigenous people and local communities, and include protected forest areas in policies/programmes for public education and awareness;

(j) Encourage countries that share transboundary forest and other resources, in particular water resources, to establish joint protected forest areas, and negotiate agreements concerning their collaborative management;

(k) Encourage countries, with the support of international organizations, to link *in situ* and *ex situ* conservation measures and efforts, and to undertake comprehensive forest estate conservation planning to identify and protect, through appropriate mechanisms, the full range of forest values, including all levels of biological diversity, environmental services, cultural, social and economic values;

(l) Urge countries, with support from international organizations, donors, financial institutions, NGOs and the private sector, to provide financial resources for the development of appropriate community education and extension services to increase community understanding of sustainable forest management, and to support community involvement in forest conservation initiatives;

(m) Encourage countries to develop and implement a range of innovative mechanisms for financing forest conservation initiatives, including environmental taxes and charges; tax deductions for private forest conservation; direct charges for protected area use; and tradeable conservation credits;

(n) Urge regional and international organizations to support, where appropriate, the establishment of ecological corridors of regional and/or global significance, in order to link important protected forest areas and forest ecosystems;

(o) Request international organizations, in particular members of the Inter-Agency Task Force on Forests, to strengthen their coordination and cooperation concerning forest conservation programmes and international policies and mechanisms which have an impact on forest conservation;

(p) Urge international organizations, particularly UNEP, the Food and Agriculture Organization of the United Nations, the International Union of Forest-Related Organizations and IUCN, to develop new definitions of protected areas, applicable to all circumstances faced by

countries, as well as a global approach for assessing the effectiveness of protected area management in relation to environmental, social, legal and economic objectives, with participation of member countries, NGOs and local communities;

(q) Urge bilateral and international cooperation/development agencies and financial institutions to provide adequate resources to support the achievement of objectives of forest conservation, including protected forest areas, through institutional strengthening and capacity-building, research and education, access to and transfer of technology, technical and scientific cooperation, and community education and extension.

Notes

[1] Opinions differ concerning the effects of fragmentation and the benefits of a large area to perimeter ratio. It has been shown that some species actually benefit from fragmentation, small-scale forest clearings, edge effects, etc.